

WHAT IS CLAIMED IS:

5

1. A network communication terminal apparatus that is adapted to exchange data with a counterpart apparatus via a network, and output an indication of an error occurrence that is to be recognized by a user when one or more of a plurality  
10 of types of errors relating to a network communication operation occur, the network communication terminal apparatus comprising:

an error/threshold occurrence number setting unit for setting and storing, for each type of the types of errors, a  
15 successive occurrence threshold number corresponding to a number of times the type of error is to occur successively before an indication of an error occurrence of the type of error is output;

an error/occurrence number counting unit for counting, for  
20 each type of the types of errors, the number of successive occurrences of the type of error; and

an error occurrence output unit for outputting an indication of the error occurrence of a specified type of error in a case where the successive occurrence number of each type  
25 of error counted by the error/occurrence number counting unit

and the threshold occurrence number of each type of error set  
by the error/threshold occurrence number setting unit are  
compared to find that the successive occurrence number of the  
specified type of error is equal to the threshold occurrence  
5 number of the specified type of error.

10 2. The network terminal communication apparatus as  
claimed in claim 1, further comprising:

an error occurrence hysteresis storage unit for storing  
error occurrence hysteresis information for each of the types  
of errors; and

15 an error occurrence hysteresis output unit for outputting  
the stored error occurrence hysteresis information.

20

3. A network communication terminal apparatus that is  
adapted to exchange data with a counterpart apparatus via a  
network, and output an indication of an error occurrence that  
is to be recognized by a user when one or more of a plurality  
25 of types of errors relating to a network communication

operation occur, the network communication terminal apparatus comprising:

an error group/threshold occurrence number setting unit for dividing the types of errors into a plurality of error groups by categorically grouping the types of errors and setting and storing, for each group of the error groups, a successive occurrence threshold number corresponding to a number of times one or more types of errors belonging to the error group are to occur successively before an indication of an error occurrence of the error group is output;

an error/occurrence number counting unit for counting, for each type of error, the number of successive occurrences of the type of error; and

an error group occurrence output unit for outputting an indication of the error occurrence of a specified error group in a case where the successive occurrence number of each error group counted by the error/occurrence number counting unit, and the threshold occurrence number of each error group set by the error/threshold occurrence number setting unit are compared to find that the successive occurrence number of the specified error group is equal to the threshold occurrence number of the specified error group.

4. The network terminal communication apparatus as claimed in claim 3, further comprising:

an error occurrence hysteresis storage unit for storing  
5 error occurrence hysteresis information for each of the types  
of errors; and

an error occurrence hysteresis output unit for outputting  
the stored error occurrence hysteresis information.

10

5. A network communication terminal apparatus that is adapted to exchange data with a counterpart apparatus via a  
15 network, and output an indication of an error occurrence that  
is to be recognized by a user when one or more of a plurality  
of types of errors relating to a network communication  
operation occur, the network communication terminal apparatus  
comprising:

20 a specified error/threshold occurrence number setting unit  
for setting and storing a predetermined successive occurrence  
threshold number for a specified type of the types of errors,  
the predetermined successive occurrence number corresponding to  
a number of times the specified type of error is to occur  
25 successively before an indication of an error occurrence of the

specified type of error is output;

a specified error/occurrence number counting unit for counting the number of successive occurrences of the specified type of error; and

5 a specified error occurrence output unit for outputting the indication of the error occurrence of the specified type of error in a case where the successive occurrence number of the specified type of error counted by the specified error/occurrence number counting unit and the threshold  
10 occurrence number of the specifies type of error set by the specified error/threshold occurrence number setting unit are compared to find that the successive occurrence number is equal to the threshold occurrence number.

15

6. The network terminal communication apparatus as claimed in claim 5, further comprising:

20 an error occurrence hysteresis storage unit for storing error occurrence hysteresis information for each of the types of errors; and

an error occurrence hysteresis output unit for outputting the stored error occurrence hysteresis information.

25

7. A network communication terminal apparatus that is  
5 adapted to exchange data with a counterpart apparatus via a  
network, and output an indication of an error occurrence that  
is to be recognized by a user when one or more of a plurality  
of types of errors relating to a network communication  
operation occur, the network communication terminal apparatus  
10 comprising:

an unspecified error/threshold occurrence number setting  
unit for setting and storing a predetermined successive  
occurrence threshold number corresponding to a number of times  
unspecified types of the types of errors are to occur  
15 successively before the indication of the error occurrence is  
output;

an unspecified error/occurrence number counting unit for  
counting a number of successive occurrences of the unspecified  
types of errors; and

20 an unspecified error occurrence output unit for outputting  
the indication of the error occurrence in a case where the  
successive occurrence number of the unspecified types of errors  
counted by the unspecified error/occurrence number counting  
unit and the threshold occurrence number of the unspecified  
25 types of errors set by the unspecified error/threshold

occurrence number setting unit are compared to find that the successive occurrence number is equal to the threshold occurrence number.

5

8. The network terminal communication apparatus as claimed in claim 7, further comprising:

10        an error occurrence hysteresis storage unit for storing error occurrence hysteresis information for each of the types of errors; and

          an error occurrence hysteresis output unit for outputting the stored error occurrence hysteresis information.

15

9. A method of providing an error occurrence indication to a user in a network communication terminal apparatus that is adapted to exchange data with a counterpart apparatus via a network, the error occurrence indication being output when one or more of a plurality of types of errors relating to a network communication operation occur, the method comprising:

25        comparing a successive occurrence count number and a

predetermined threshold occurrence number of each of the types of errors; and

outputting an error occurrence indication of a specified type of error of which the successive occurrence count number is determined to be equal to the predetermined threshold occurrence number in the comparing step.

10

10. A method of providing an error occurrence indication to a user in a network communication terminal apparatus that is adapted to exchange data with a counterpart apparatus via a network, the error occurrence indication being output when one or more of a plurality of types of errors relating to a network communication operation occur, the method comprising:

comparing a successive occurrence count number and a predetermined threshold occurrence number of each of error groups into which the types of errors are categorically grouped; and

outputting an error occurrence indication of a specified error group of which the successive occurrence count number is determined to be equal to the predetermined threshold occurrence number in the comparing step.

25



11. A method of providing an error occurrence indication  
5 to a user in a network communication terminal apparatus that is  
adapted to exchange data with a counterpart apparatus via a  
network, the error occurrence indication being output when one  
or more of a plurality of types of errors relating to a network  
communication operation occur, the method comprising:

10 comparing a successive occurrence count number and a  
predetermined threshold occurrence number of a specified type  
of error; and

outputting an error occurrence indication of the specified  
type of error when it is determined in the comparing step that  
15 the successive occurrence count number is equal to the  
predetermined threshold occurrence number.

20

12. A method of providing an error occurrence indication  
to a user in a network communication terminal apparatus that is  
adapted to exchange data with a counterpart apparatus via a  
network, the error occurrence indication being output when one  
25 or more errors relating to a network communication operation

occur, the method comprising:

comparing a successive occurrence count number and a  
predetermined threshold occurrence number of the errors; and

outputting the error occurrence indication when it is  
5 determined in the comparing step that the successive occurrence  
count number is equal to the predetermined threshold occurrence  
number.